Application No. 10/537,756 WSGR Reference No. 35813-709.831

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application. The following amendments do not constitute an admission regarding the patentability of the amended subject matter and should not be so construed. Applicant reserves the right to pursue the subject matter of any canceled claim in this or any other appropriate patent application.

Listing of Claims:

- (Withdrawn) A method of screening or testing for candidate anti-fungal compounds that impair 1-phosphotidylinositol-4-phosphate 5-kinase enzyme (MSS4) function, comprising: a) providing fungal MSS4; b) providing one or more candidate compounds; c) contacting said MSS4 with said one or more candidate compounds; and d) determining the interaction of the candidate compound with said MSS4.
- (Withdrawn) A method according to claim 1 wherein the MSS4 comprises a fragment, a function-conservative variant, an active fragment or a fusion protein of MSS4.
- (Withdrawn) A method according to claim 1, wherein the fungal MSS4 is from fungus of Candida or Aspergillus species.
- 4. (Withdrawn) A modified eukaryotic cell(s) wherein the cell(s) expresses fungal MSS4 under the control of a heterologous promoter.
- 5. (Withdraw) The cell according to claim 4 which is a C. albicans cell.
- (Withdrawn) The cell according to claim 4, wherein the MSS4 is homologous.
- 7. (Withdrawn) The cell according to claim 4, wherein the MSS4 comprises a fragment, a function-conservative variant, an active fragment or a fusion protein of MSS4.
- (Withdrawn) A method of screening or testing for candidate anti-fungal compounds that impair 1-phosphotidylinositol-4-phosphate 5-kinase enzyme (MSS4) function, comprising: a)

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providing fungal MSS4 in a eukaryotic cell(s) as defined in claim 4; b) providing one or more candidate compounds; c) contacting said eukaryotic cell(s) with said one or more candidate compounds; and d) determining the interaction of the candidate compound with said MSS4 by assessing the effect on growth or viability of said cells.

- 9. (Currently Amended) A compound identified by the method of claim 1, which impairs fungal 1-phosphotidylinositol-4-phosphate 5-kinase enzyme (MSS4) function-for use as an antifungal compound, that is identified by screening or testing for compounds that impair MSS4 function, comprising the steps of: a) providing fungal MSS4; b) providing one or more candidate compounds; c) contacting said fungal MSS4 with said one or more candidate compounds; and d) determining if the candidate compound impairs fungal MSS4 function.
- (Currently Amended) A composition comprising a <u>compound of claim 9 or 17 eomposition</u>
 eomprising a <u>MSS4 inhibitor</u> and a <u>at least one</u> pharmaceutically acceptable carrier.
- 11. (Withdrawn) Candida or Aspergillus MSS4 as a specific target for antifungal compounds.
- 12. (Canceled)
- 13. (Canceled)
- 14. (Withdrawn) The method according to claim 18 wherein the fungal infection is a topical, mucosal or systemic fungal infection.
- 15. (Withdrawn) The method according to claim 14 wherein the topical or mucosal fungal infection is caused by species of Candida or the systemic fungal infection is caused by species of Candida or Aspergillus.
- 16. (Withdrawn) The method according to claim 18 wherein said compound impairs fungal MSS4 function to a greater extent than host MSS4 function.

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- 17. (Currently Amended) A compound the method of claim 8; which impairs fungal 1phosphotidylinositol-4-phosphate 5-kinase enzyme (MSS4) function for use as an antifungal
 compound that is identified by screening or testing for candidate compounds that impair MSS4
 function, comprising the steps of: a) providing at least one eukaryotic cell that expresses fungal
 MSS4 under the control of a heterologous promoter; b) providing one or more candidate
 compounds; c) contacting said at least one eukaryotic cell with said one or more candidate
 compounds; and d) determining if the candidate compound impairs fungal MSS4 function.
- 18. (Withdrawn) A method for the treatment or prevention of fungal infections in a host, which comprises administering to the host a therapeutically or prophylactically effective amount of a MSS4 inhibitor.
- 19. (Withdrawn) A method for the treatment or prevention of fungal infections in a subject who is immunosuppressed, which comprises the step of administering to the subject a therapeurtically or prophylactically effective amount of a MSS4 inhibitor.
- 20. (Withdrawn) The method according to claim 19 wherein the fungal infection is a topical, mucosal or systemic fungal infection.
- 21. (Withdrawn) The method according to claim 19 wherein the topical or mucosal fungal infection is caused by species of Candida or the systemic fungal infection is caused by species of Candida or Aspergillus.
- 22. (Withdrawn) The method according to claim 19 wherein said compound impairs fungal MSS4 function to a greater extent than host MSS4 function.